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JDN MONOCRANE

Operating and Maintenance Instructions

CHR Electric Chain Hoist

A PRODUCT FOR THE WORLD

JDN MONOCRANE electrical chain hoists are designed and manufactured according to the specification of 2006/42 CE Directive and subsequent amendments denominated Machinery Directive, as per legislative Italian System with D.P.R.N.459.



STANDARD SPECIFICATIONS

CEE Directive 2006/42/CE (Machinery Directive)
CEE Directive 2006/95/CE (Low Voltage Tension Directive)
Directive 2004/108/CE (Electromagnetic Compatibility Directive)
UNI EN 12100 (safety of the machine)
IEC EN 60204-1 (safety of the electrical parts)
IEC EN 13850 (emergency button)

JDN MONOCRANE Electric chain hoists are available in a full range of sizes from 125kg through to 5000kg and with eye or hook suspension, push travel trolleys, electric travelling trolleys and Manual geared trolleys. They are available in a full range of voltages to cover all applications.

All hoists up to 2000kg capacity are available as single fall hoists; 2000, 3000, 3200, 4000 and 5000 kg are available as 2 fall hoists. All hoists are available with a full range of hoisting speeds both single and two speed.

Images shown within this document are for illustration purposes only



INDEX

Section	Page
1. Contents	4
2. General information	4
3. Pre-installation, before use	5
4. Safety instructions	5
5. Technical features	7
6. Safety items	9
7. Installation	9
8. Assembling the hoist	10
9. Installation of push, electric or mechanical trolley	14
10. Changing the voltage	15
11. Operational tests	16
12. Operation	17
13. Installing the hoist after a period of inactivity	18
14. Maintenance and periodical checks	18
15. Maintenance	20
16. Replacing the chain	25
17. Problem solving	26
18. W Series Hoist Parts	27
19. WR Series 2t Hoist Parts	29
20. WR Series 3t / 3.2t / 4t / 5t Hoist Parts	31

1. CONTENT OF THE MANUAL

This manual contains instructions for installation, use, and maintenance of the electric chain hoist and must always be in the possession of a responsible person and always available for consultation. Therefore, it is obligatory to read this manual before using the hoist. This manual conforms to all of the standard 2006/42/CE and all consecutive amendments and covers the safe use of the hoist with respect to the statutory requirements.

2. GENERAL INFORMATION

Important please read

This publication should be read by:

- The supervisor of the business
- The installation engineers
- The user of the hoist
- The maintenance department

THE HOIST MANUAL MUST ALWAYS BE IN A PLACE WHERE IT IS READILY ACCESSIBLE FOR CONSULTATION.

3. PRE-INSTALLATION, BEFORE USE

Before using your **JDN MONOCRANE** Hoist, you must read this manual fully.

The correct functioning of the hoist is strictly related to the correct application of the instructions contained in this manual.

The instructions written in this manual fully comply with the standard 2006/42/CE.

4. SAFETY INSTRUCTIONS

The hoist must only be used to lift in the vertical position and the stated MRC must not be exceeded. Any improper use, which does not conform to the specifications, is in no way the responsibility of **JDN MONOCRANE**.

Ensure correct use of the hoist at all times.

The hoist must **ONLY** be used by the assigned, trained personnel.

Do not use the hoist to lift or transport personnel.

Do not lift the load near or over any personnel.

Do not allow the load to swing.

Do not leave a load suspended from the hoist.

Warn all personnel in the immediate area that you are going to operate the hoist.

Do not lift a load above the maximum capacity specified in the hoist and on the bottom hook.

Always concentrate fully while operating the hoist.

If you are unsure about the hoist, the load to be lifted, the slings or the weight of the load, check with your supervisor before carrying out the lift.

Do not modify the hoist hook in any way.

Any slings used for lifting should be checked for the correct WLL for the load to be lifted, and any signs of damage that could affect the WLL.

Do not use the load chain for slinging the load.

4.2 BEFORE USE, AND EACH DAY.

- Do not allow the load to swing
- Check that the brake and clutch are operating correctly.
- Check that the chain is correctly lubricated.
- Ensure that the load chain is not twisted.
- Check the correct operation of all motions.
- Check the load hook for any damage, cracks and the correct fit of the safety catch.
- If the hoist is fitted onto a runway beam, crane or jib crane, check the correct seating of the trolley and wheels on the bottom flange and that the end stops are in place and correctly fitted.
- Check the load to be lifted is within the lifting capacity of the hoist.
- On dual speed hoists the slow speed should be used only for the positioning of the load
- On two fall hoists ensure that the load chain is not twisted and runs freely through the bottom block casings.

4.3 DURING USE AND AT ALL TIMES.

- Ensure that the load is well secured and correctly seated in the load hook.
- Always concentrate fully when using the hoist.
- Never side load the hoist by pushing or pulling the load to one side.
- Do not allow the load to swing.
- Do not leave a load suspended from the hoist.
- When lifting a load the chain's tension must always be vertical to the hoist.
- Never use the chain to pull loads that are not directly under the hoist
- Avoid continuous ON – OFF switching of the control buttons
- Never support the load on the point of the hook.
- Do NOT use the clutch continuously at a top limit, as it will cause excessive wear, leading to eventual and premature failure of components.
- Do NOT use the pendant cable to pull the hoist into position.
- Do NOT use any other chain than that specified.
- If at any time, you notice any excessive noise from the hoist or the load drops when the hoist stops, report it to your supervisor and do not use the hoist.

4.4 AFTER USE

- NEVER leave a load suspended or unattended.
- ALWAYS set the emergency STOP button.
- ALWAYS isolate the hoist.
- NEVER make repairs without observing the instructions.

4.5 ROUTINE INSPECTION AND MAINTENANCE.

- All hoists should be regularly inspected and checked for damage, correct operation and wear. If the following guides are carried out it will help extend the working life of the hoist.

5. TECHNICAL FEATURES

SUPPLY:	400 V 3ph 50 Hz. Control system is supplied at 24 V for operators' safety (EN60204) Waterproof and drip proof for complete protection and longer life (IP55 DOM 40050). Pendant and hoist panel. Hoist motor IP55, general in-door non-aggressive use.
INSULATION:	All parts are F insulated (max 95° Celsius)
CHAIN:	Treated, tempered and nitrified. These special treatments ensure a high degree of resistance to wear and corrosion. Its safety factor is better than 10.
LOAD SPROCKET	JDN MONOCRANE's unique design ensures that the chain runs smoothly. It has been thermally treated to prevent, almost entirely, its wear and that of the chain.

Motor Features									
380/400/415V 3Phases 50 Hz					Weights of Hoists in Kg				
Hoist Code	RPM	Motor Type	Kw	Load Current	Starting Current	Eye Suspension	Push Travel	Elec. Travel	Gear Travel
125W5	1400	4P	0.5	1.2	1.9	27	33	57	43
125W8	1400	4P	0.5	1.2	1.9	27	33	57	43
125W12	2800	2P	1	2.1	2.6	29	35	59	45
125W14	700/2800	2/8P	0.2-0.5	1/1.6	1.1/1.8	27	33	57	43
125W28	700/2800	2/8P	0.2-0.5	1/1.6	1.1/1.8	29	35	59	45
125W312	700/2800	2/8P	0.25-1	1/1.6	1.1/1.8	29	35	59	45
250W5	1400	4P	0.5	1.2	1.9	27	33	57	43
250W8	1400	4P	0.8	2.7	2.3	27	33	57	43
250W12	2800	2P	1	2.1	2.6	29	35	59	45
250W16	2800	2P	1	2.1	2.6	29	35	59	45
250W14	700/2800	2/8P	0.2-0.5	1/1.6	1.1/1.8	27	33	57	43
250W28	700/2800	2/8P	0.25-1	1.6/1.7	2.3/2.8	35	35	59	45
250W312	700/2800	2/8P	0.25-1	1.6/1.7	2.3/2.8	35	41	65	51
500W4	1400	4P	0.8	1.7	2.3	29	35	59	45
500W6	1400	4P	0.8	1.7	2.3	29	35	59	63
500W8	1400	4P	1	2.1	2.8	35	41	65	63
500W12	2800	4P	1.4	2.6	3.5	35	41	65	90
500W14	700/2800	2/8P	0.25-1	1.6/1.7	2.3/2.8	35	41	65	63
500W28	700/2800	2/8P	0.4-1.8	1.7/2	2.5/5.5	44	57	74	70
1000W4	1400	4P	1	2.1	2.8	41	54	71	70
1000W6	1400	4P	1.6	2.3	3.2	44	57	74	70
1000W8	1400	4P	2	3	5.7	67	83	98	86
1000W14	700/2800	2/8P	0.4-1.8	1.7/2	2.5/5.5	44	57	74	61
1000W28	700/2800	2/8P	0.5-2	2.5/4.7	3.5/6	69	85	102	88
1500W4	1400	4P	2	3	5.7	82	98	114	103
1500W14	700/2800	2/8P	0.5-2	2.5/4.7	3.5/6	87	102	117	107
2000W4	1400	4P	2	3	5.7	82	98	114	103
2000W14	700/2800	2/8P	0.5-2	2.5/4.7	3.5/6	87	102	117	107

Motor Features									
380/400/415V 3Phases 50 Hz					Weights of Hoists in Kg				
Hoist Code	RPM	Motor Type	Kw	Load Current	Starting Current	Eye Suspension	Push Travel	Elec. Travel	GearTravel
1000WR8	2800	4P	2	3	5.7	78	93	110	96
1000WR12	2800	2P	3	4.5	10.5	98	120	130	123
1000WR28	700/2800	2/8P	0.5-2	2.5/4.7	3.5/6	80	95	110	98
1000WR312	700/2800	2/8P	0.7-3	3.3/6.4	4.1/7.8	83	98	130	102
1500WR4	1400	4P	2	3	5.7	90	105	115	108
1500WR8	2800	2P	3	4.5	10.5	98	120	130	123
1500WR12	2800	2P	3	4.5	10.5	98	120	130	123
1500WR14	700/2800	2/8P	0.5-2	2.5/4.7	3.5/6	90	105	115	108
1500WR312	700/2800	2/8P	0.7-3	3.3/6.4	4.1/7.8	105	120	130	123
1500WR28	700/2800	2/8P	0.7-3	3.3/6.4	4.1/7.8	98	120	130	123
2000WR4	1400	4P	2	3	5.7	90	105	115	108
2000WR8	1400	4P	3	4.5	10.5	105	120	130	123
2000WR14	700/2800	2/8P	0.5-2	2.5/4.7	3.5/6	90	105	115	108
2000WR28	700/2800	2/8P	0.7-3	3.3/6.4	4.1/7.8	98	125	134	123
2500WR8	1400	4P	3	4.5	10.5	98	115	134	128
2500WR28	700/2800	2/8P	0.8-3.5	4.5/6.5	5.2/10	98	125	134	128
3000WR4	2800	2P	3	4.5	10.5	103	125	140	128
3000WR14	700/2800	2/8P	0.7-3	3.3/6.4	4.1/7.8	113	135	140	128
3200WR4	2800	2P	3	4.5	10.5	103	125	140	128
3200WR14	700/2800	2/8P	0.7-3	3.3/6.4	4.1/7.8	113	135	140	128
4000WR14	700/2800	2/8P	0.7-3	3.3/6.4	4.1/7.8	118	140	150	138
5000WR4	2800	2P	3	4.5	10.5	123	145	158	148
5000WR14	700/2800	2/8P	0.8-3.5	4.5/6.5	5.2/10	123	145	158	148
Travel Motors									
All	0.2 Kw		Single speed		Full load current 1.2A Starting current 1.3A				
All	0.1/0.2 Kw		Dual speed		Full load current 0.7/1A Starting current 1/1.8A				
All	0.5 Kw		Single speed		Full load current 2.1A Starting current 2.6A				
All	0.2/0.5 Kw		Dual speed		Full load current 1.7/2,6A Starting current 1,8/2.8A				

REDUCTION GEAR LUBRICATION

W SERIES - GREASE		Hoist 0,12 t / 0,25 t / 0,5 t = 150 g	
		Hoist 1 t / 2 t = 200 g	
Grease options		Mobil – Mobilux EP1	Castrol – Spheerol EPL1
WR SERIES - GEAR OIL		Hoist 1 t / 1,5 t / 2 t / 3 t / 3,2 t = 400 ml	
		Hoist 2,5 t / 4 t / 5 t = 500 ml	
Gear oil options		Mobil – Mobilegear 600XP 460	Castrol – Alphasyn P460
		Shell – Omala S2 G 460	Valvoline – EPG460

6. SAFETY ITEMS

6.1 MOTOR BRAKE

The DC electromagnetic brake system guarantees high power stopping allowing you to hold the load in the desired position.

For the W series, it is 220 VDC

For the WR series it is 400 VAC

6.2 CLUTCH

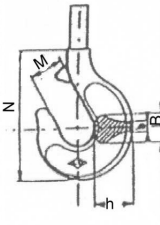
The **JDN MONOCRANE** hoist is fitted with a clutch to prevent overloading, ensuring that loads to be lifted do NOT exceed the maximum capacity of the hoist. The clutch also intervenes when the hook reaches to the top and bottom of its path. However, this is only a safety feature and should not be used as a working limit. Prolonged use will lead to mechanical failure.

THE CLUTCH IS TESTED AT 25% MORE THAN THE NOMINAL CAPACITY.

6.3 SAFETY HOOK

The hook has been forged in highly resistant material which prevents it from breaking in the event that it is over loaded. The safety catch ensures that the load is picked up securely and prevents unhooking. In the event that the hook becomes deformed, it must not exceed more than 0.25%. If this percentage is exceeded, replace immediately with a new hook supplied by

JDN MONOCRANE with the relevant certificate.

	Capacity Kg	M	H	B	N
	1000	36	38	29	132
	2000	43	49	39	160
	3000/3200	45	57	48	182
	4000	50	70	56	206
	5000	50	70	56	206

6.4 EMERGENCY STOP BUTTON

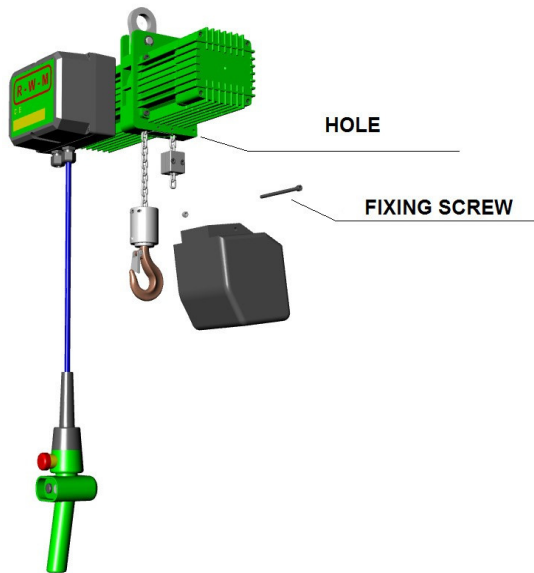
In compliance with the standard 2006/42/CE, the push button control panel is supplied with an emergency mushroom head button, which, if pressed in an emergency situation, stops the hoist. To re-start the hoist, turn the stop button to the RIGHT to release the button.

7. INSTALLATION

Prior to installing the hoist, ALWAYS ensure that the structure it is being suspended from is capable of carrying the hoist AND its load, and has been certified to do so. Also make sure that the power supply being used complies with that specified for the hoist.

8. ASSEMBLING THE HOIST

8.1 ASSEMBLING THE CHAIN COLLECTOR



1. Position the chain collector in such a way that the hole corresponds with that of the hoist body; the bevel must be facing backwards
2. Insert the chain evenly.
3. To avoid irregular bunching, NEVER insert all the chain in together
4. Insert the screws and secure with the nut to the relevant hole at the edge of the central body

Once the hoist is fully assembled to the supporting structure, it is considered by the current legislation as a new machine and is, therefore, subject to testing of the entire system.

8.2 LUBRICATING THE CHAIN

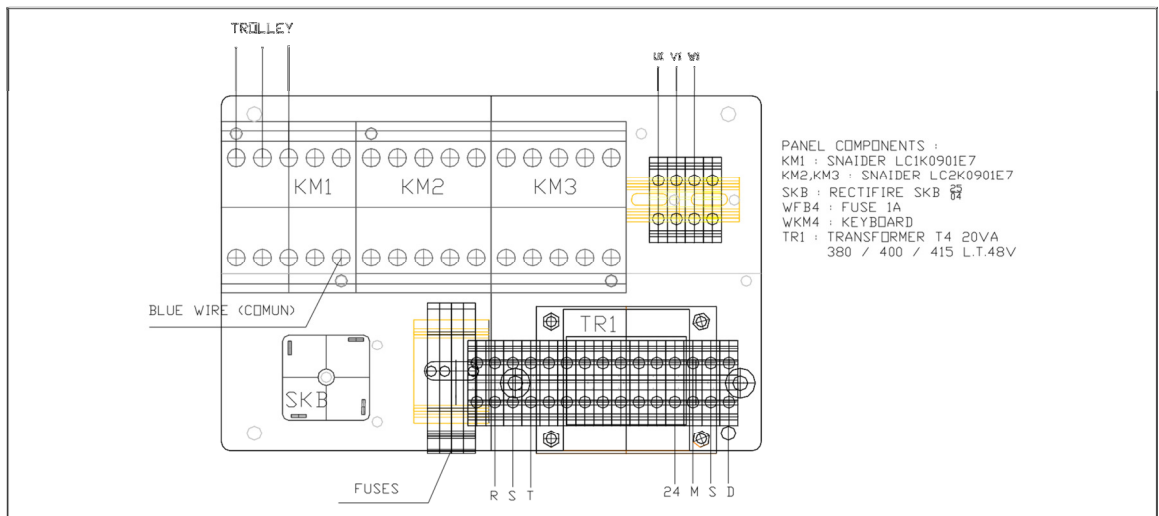
Smear the chain with industrial oil or gears oil in order to prevent wear of the chain itself and the load sprocket.

8.3 CONNECTION TO THE FEED

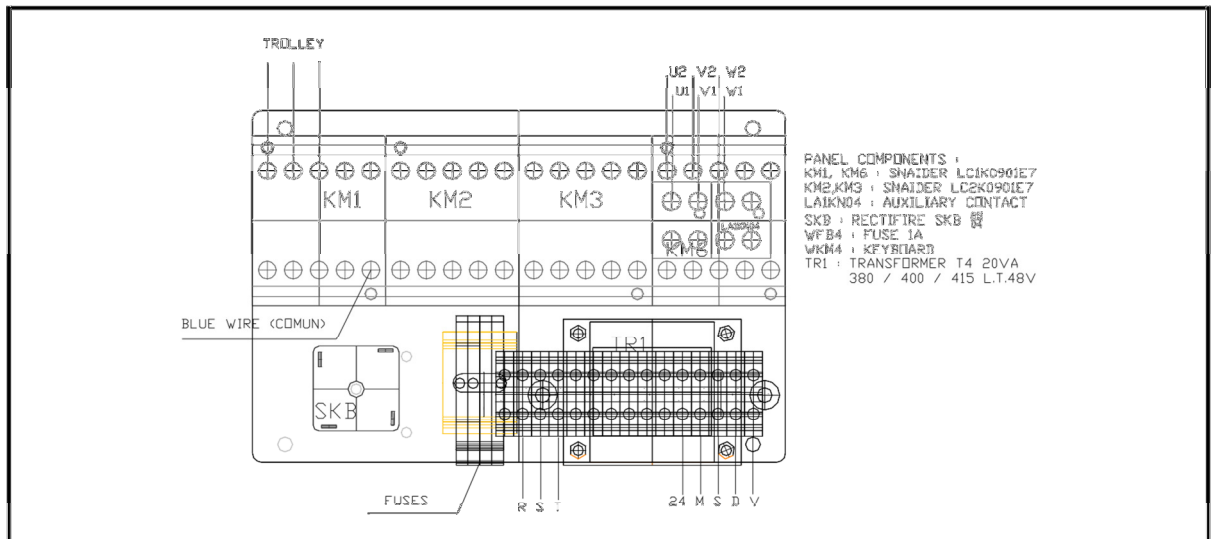
Ensure that the hoist is compatible to the line voltage of the installation and if necessary perform the relevant modifications to adapt it. Connect the feed line to the hoist, to the R, S and T terminals of the printed circuit. The hoists' power feed supply should be provided from a suitable fused and isolatable supply. Minimum cable size 1.5mm. The isolator should be mounted in an accessible place as close to the hoist as possible. The fourth wire, with a yellow-green insulating sheath, must be connected to the earth terminal situated inside the electrical board and then connected to the earth system.

WARNING! If used with an incorrect voltage, the hoist can suffer serious damage. Ensure that the line voltage corresponds to that required, (voltage indicated on the hoist plate.)

HOIST PANEL W SERIES SINGLE SPEED

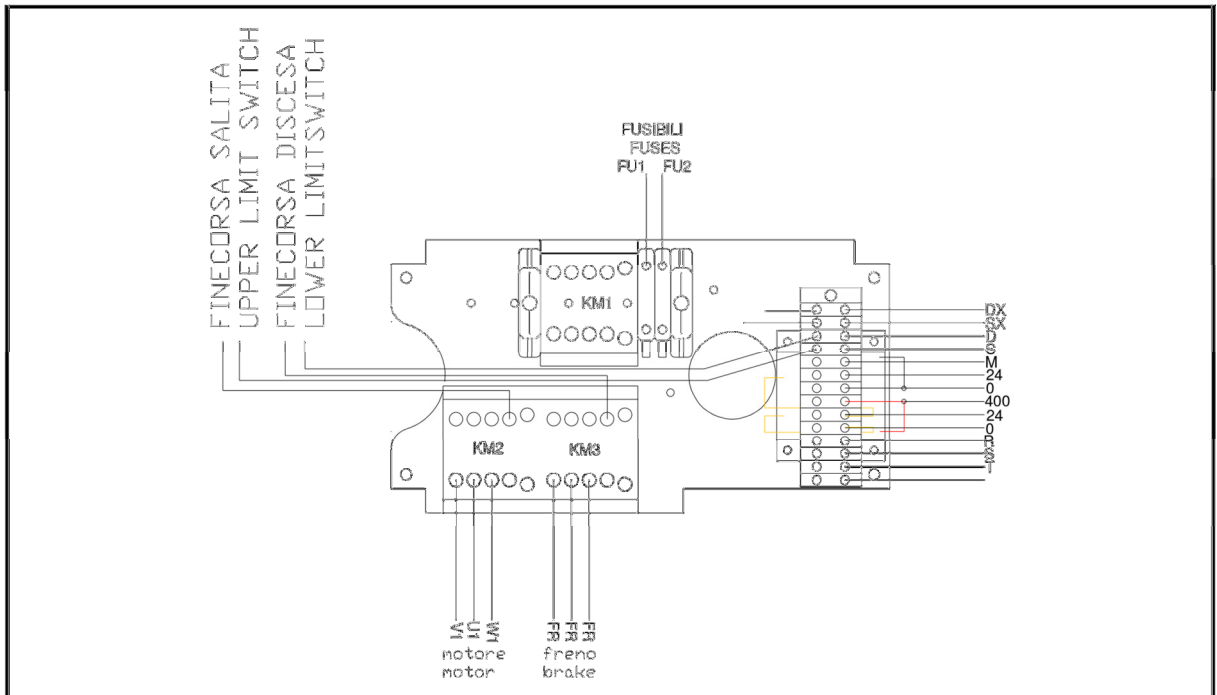


HOIST PANEL W SERIES DOUBLE SPEED

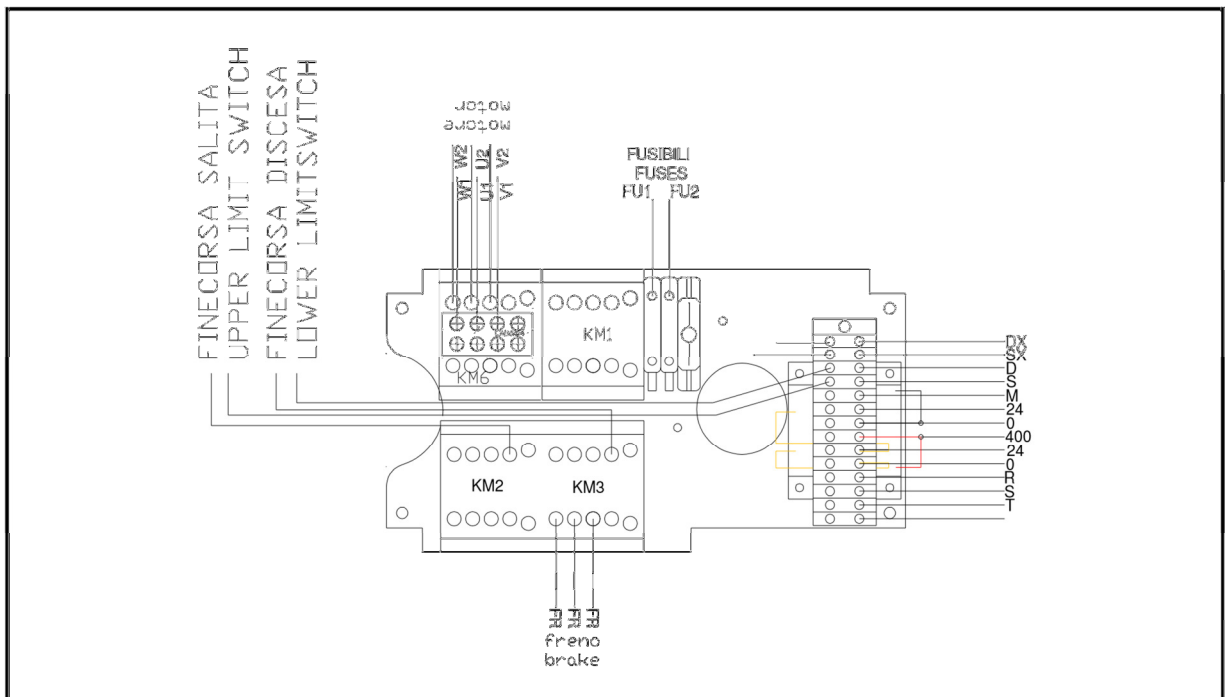


For pendant connection look at page 13

HOIST PANEL WR SERIES 2t SINGLE SPEED

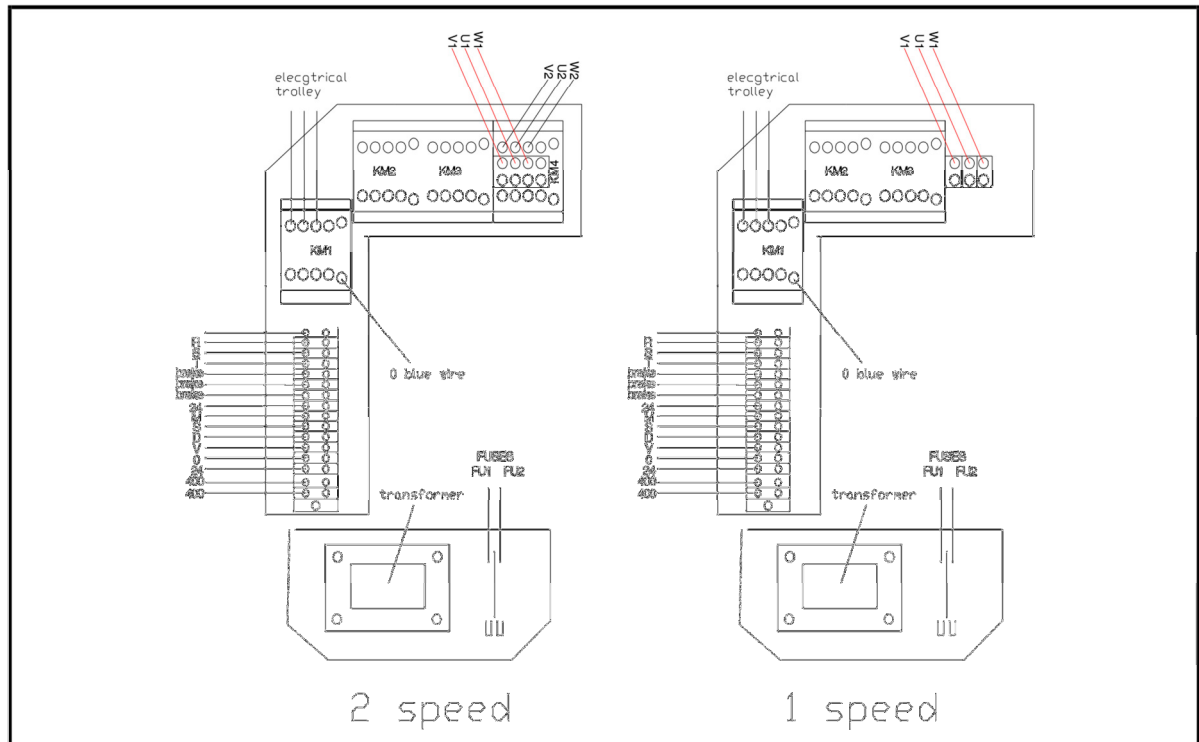


HOIST PANEL WR SERIES 2t DOUBLE SPEED



For pendant connection look at page 13

HOIST PANEL WR SERIES 3,4,5t SINGLE AND DOUBLE SPEED



MOTORS TERMINALS

U1, V1, W1 = SINGLE SPEED MOTOR

U1, V1, W1 = SINGLE SPEED MOTOR

U2, V2, W2 = DOUBLE SPEED MOTOR

HOIST PENDANT TERMINALS

24V : LOW TENSION

WIRE N.1

M : LINE

WIRE N.5

S : UP

WIRE N.2

D : DOWN

WIRE N.3

V : 2° SPEED

WIRE N.4

HOIST + TROLLEY PENDANT TERMINALS

24V : LOW TENSION

WIRE N.1

M : LINE

WIRE N.7

S : UP

WIRE N.2

D : DOWN

WIRE N.3

V : 2° SPEED HOIST

WIRE N.4

Dx : LEFT

WIRE N.5

Sx : RIGHT

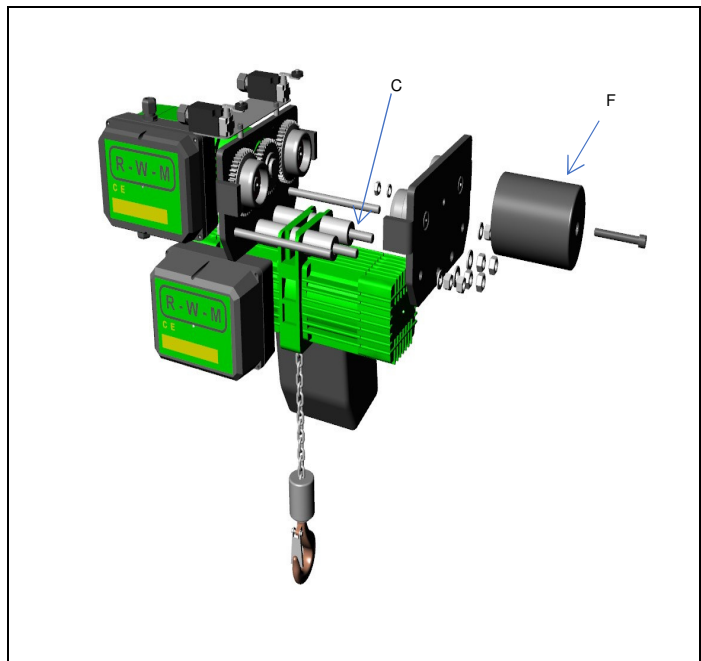
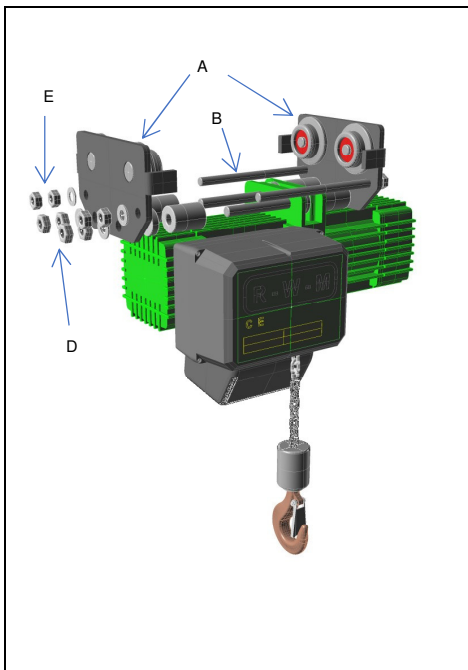
WIRE N.6

V : 2° SPEED TROLLEY

WIRE N.8

9. INSTALLATION OF PUSH, ELECTRIC OR MECHANIC TROLLEY.

1. The trolley should be set with a 3- 4mm gap between the flange of the beam and the hoist trolley wheel flanges
2. To set the width, add or subtract an even number of spacers from an even number of spacers from either side of the hoist.
3. Adjust the crossbars as required to ensure the trolley side plates are parallel
4. Ensure the hoist is positioned in the centre of the trolley and the green spacers are fitted in the centre of the of the hoist suspension plates
5. Lift up the hoist and install on the beam
6. Check all bolts and nuts for correct tightness.
7. If utilising a power travel trolley, fit the correct limit trips to the lifting beam to allow the travel limits to operate.
8. Check the operation of the hoist on the beam.
9. Lubricate the trolley gears with a suitable open gear lubricant.

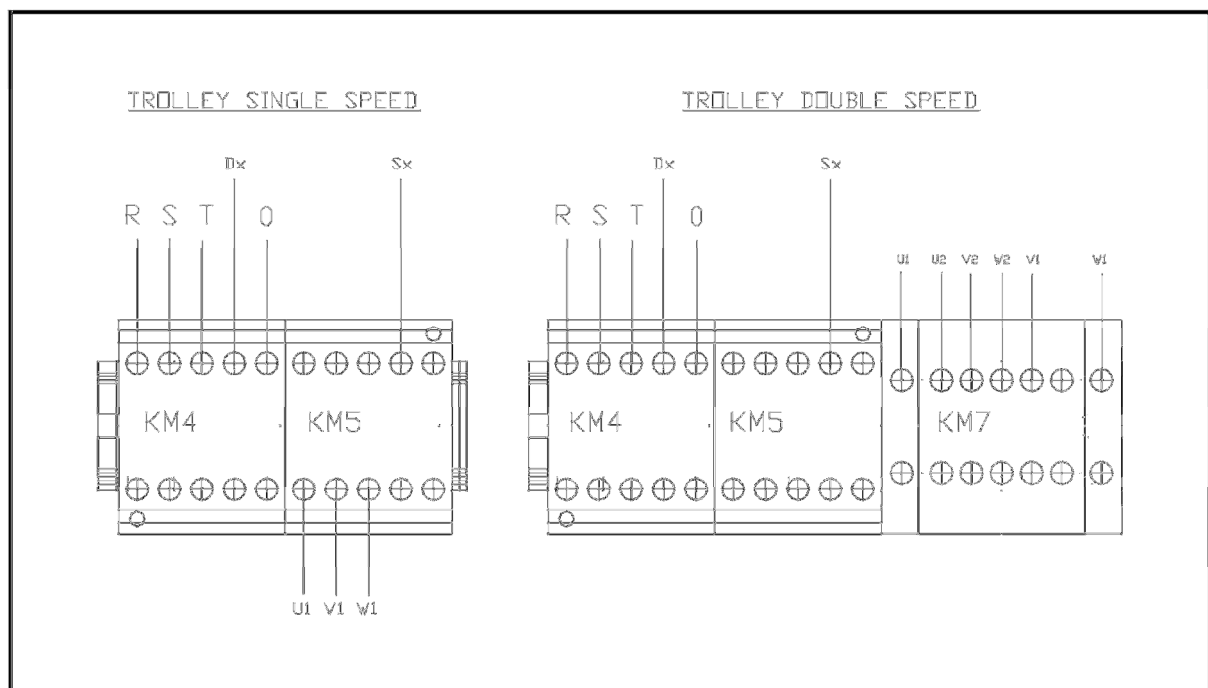


A = side plate
B = spacer
C = trolley load bar
D = load bar nut
E = spacer bar nut
F = balancer weight

10. CHANGING THE VOLTAGE

WARNING! The trolley as sold is already set to the voltage requested by the user. ANY change in voltage MUST be performed by qualified personnel.

1. Remove the cover by unscrewing the socket head screws and removing them from their seats.
2. For 400 V three-phase line voltage, connect together the three wires from the motor into a terminal (motor with star connection.)
3. For 230 V three-phase line voltage connect the three wires from the motor to the terminals 2, 4 and 6 (motor with triangular connection). This operation is possible only for single speed trolley.



MOTOR CONNECTION

R,S,T, = POWER

U1, V1, W1 = SINGLE SPEED MOTOR

U1, V1, W1 = SINGLE SPEED MOTOR

U2, V2, W2 = DOUBLE SPEED MOTOR

0 = BLUE WIRE (COMMON)

Dx = LEFT

Sx = RIGHT

11. OPERATIONAL TEST

11.1 LIFTING TEST

Switch on the power to the hoist with the isolator and then turn the emergency stop button in

order to release it. Press the button   on the pendant to check the direction of the hoist. The movement of the chain should correspond with what is indicated on the pendant button.

If the direction is reversed, disconnect the isolator and reverse the two wires on terminals S and T.

If the hook does not move, check the power supply - is there power to the hoist? / Is there a phase down?

11.2 TESTING THE 2 SPEEDS.

If the hoist has two speeds, the buttons have a double pressure, and are marked for up  and down . With the first pressure, either raising, or lowering, the hoist runs at the slower speed; pressing the button in to the second stage, makes the hoist run at the faster speed.

11.3 TRAVEL TEST

Press the button  Or  on the pendant to verify that the trolley runs in the right direction. If the rotation is reversed, disconnect the isolator switch and reverse the two wires on terminals S and T on the electrical control panel, which is mounted on the trolley motor.

11.4 CLUTCH TEST

Keep the button  on the pendant pressed to make the hook climb to the hoist body where it stops. Repeat the same manoeuvre pressing the button  to lower the hook until the chain stop comes up against the hoist body. In both cases check that the hoist motor continues to run and the clutch slips, if it does not, call **JDN MONOCRANE**, or an authorised retailer.

11.5 BRAKE TEST

With a small load of 20kg operate the  and  several times to check the correct operation of the hoist and brake. When either button is released the hoist should stop and the load held without slipping.

Repeat the above with the MRC of the hoist, again the load should be held without slipping.

11.6 OPERATING TEST OF THE EMERGENCY STOP BUTTON

Press one of the buttons   and then the emergency stop button to check that the hoist stops and remains stopped until it is released. Repeat with the other   button. If this is not the case check the control connections.

12. OPERATION

12.1 DESIGN OF THE HOIST

The hoist is designed to lift vertically and to carry loads in a horizontal path. These loads have to be within the maximum capacity specified on the hoist and certificate. ANY improper use or a use that does NOT conform to the operating specifications relieves **JDN MONOCRANE** of any responsibility.

12.2 SAFETY IN THE WORK ENVIRONMENT

The operator must have a clear view of the load at all times to operate the hoist.

The hoist must only be used for the purpose it has been intended for i.e. the lifting and moving of loads.

The loads which have to be moved must have a weight equal to or lower than the maximum capacity of the hoist, this is marked on the hoist and on the test certificate.

You **MUST** switch off the hoist when not in use.

When the work is finished, the emergency stop button must be pressed in order to stop the electric feed until work starts again.

Before carrying out any maintenance operations, tests etc. you **MUST** ensure that the electrical supply is disconnected.

No operation / repairs or maintenance should be made when the hoist is moving.

You should not use the machine with an electrical cable or a plug, which is damaged or in bad condition.

The isolator must be easily accessible to the operator.

The electrical panel of the machine cannot be changed and has to be connected with the appropriate electric voltage.

The structure of the hoist cannot be modified.

ANY improper use or any use that does not conform to the specifications as above, releases **JDN MONOCRANE** of any responsibility.

13. INSTALLING THE HOIST AFTER A PERIOD OF INACTIVITY

After a period of inactivity (6-12 months) it is recommended that you check the motor functions correctly before installing the hoist. It is possible that the brake disk may be stuck due to the process of oxidation and warping of the brake lining, especially if the machine has been left in a damp atmosphere or where steam is present. In this case, to ensure that the motor functions correctly, simply remove the cover, remove the coils and clean the brake.

14. MAINTENANCE AND PERIODICAL CHECKS

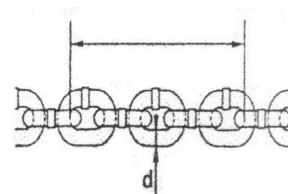
14.1 DAILY CHECKS

1. Ensure that the brake is functioning correctly.
2. Ensure that the clutch is functioning correctly, both up and down.
3. Ensure on the pendant, that the emergency stop button operates correctly.
4. Ensure that all the components are properly secured.
5. Ensure that the chain is well lubricated.
6. Ensure that the trolley runs evenly on the beams.
7. Ensure that the limit switch is working efficiently.
8. Ensure that the trolley brake functions correctly.

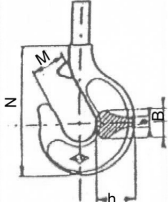
14.2 MONTHLY CHECKS

1. All checks as daily checks
2. Ensure that the pins of the hoist carrying the trolley are not bent or loose.
3. Inspect the trolley plates to ensure that they are not out of shape.
4. Measure the pitch of the chain and ensure that the dimensions do not exceed those featured in the following table. If the dimensions do exceed the allowable the chain should be replaced by a competent person, paying particular attention to the fit of the new chain on the load sprocket. Using a gauge, carefully check the measurements indicated below by measuring 5 chain links.

Nominal diameter	Pitch	5 link pitch		Tolerance limit (d)
		Standard	Limit	
4	12	60	62	3.6
5	15	75	77.5	4.5
7	22	110	113.5	6.3
10	28	140	144.5	9
11	31	155	160	9.9



5. Ensure that the hook is not deformed. Measure the size of the hook and check that it is not worn. Otherwise replace. Permanent deformation measured from the hook opening must never exceed 0.25%

	Capacity Kg	M	H	B	N
	1000	36	38	29	132
	2000	43	49	39	160
	3000/3200	45	57	48	182
	4000	50	70	56	206
	5000	50	70	56	206

WARNING! Only assemble original **JDN MONOCRANE** spare parts on the hoist.

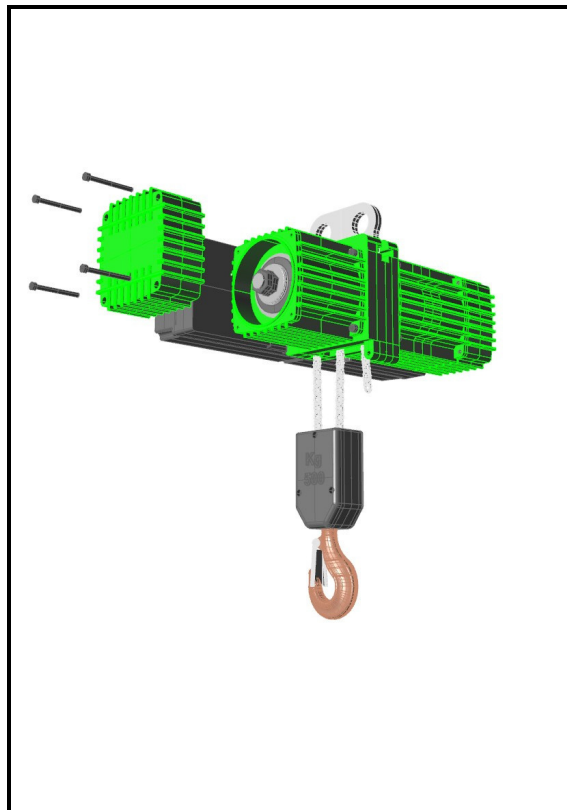
It is a statutory requirement that a competent person inspects the hoist at regular intervals.

15. MAINTENANCE

15.1 ADJUSTMENT OF THE CLUTCH W SERIES HOIST

1. Isolate the hoist.
2. Remove the aluminium reduction gear cap on the left of the motor.
3. Set the central bolt to increase the capacity of the hoist
4. Connect the hoist, lift the MRC of the hoist, adjust the screw until the hoist lifts the load.
Repeat with the MRC plus 20%.
5. Isolate the hoist.
6. Replace the aluminium cap

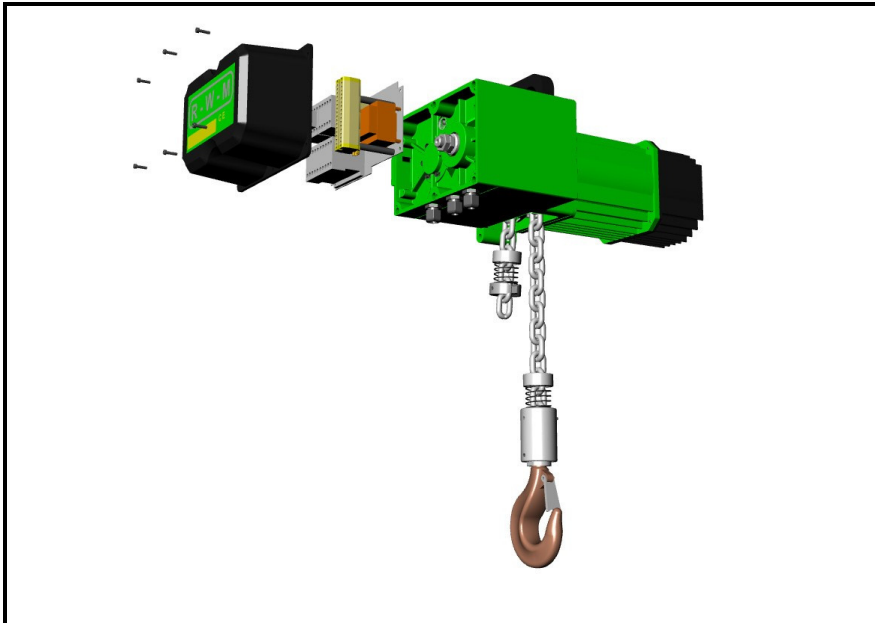
USE A 24 KEY TO ADJUST THE CLUTCH.



15.2 ADJUSTMENT OF THE CLUTCH 2t WR SERIES HOIST

1. Isolate the hoist.
2. Remove the black aluminium cover and the electric panel.
3. Set the central bolt to increase the capacity of the hoist
4. Connect the hoist, lift the MRC of the hoist, adjust the screw until the hoist lifts the load.
Repeat with the MRC plus 25%.
5. Isolate the hoist.
6. Replace the aluminium electric panel cover.

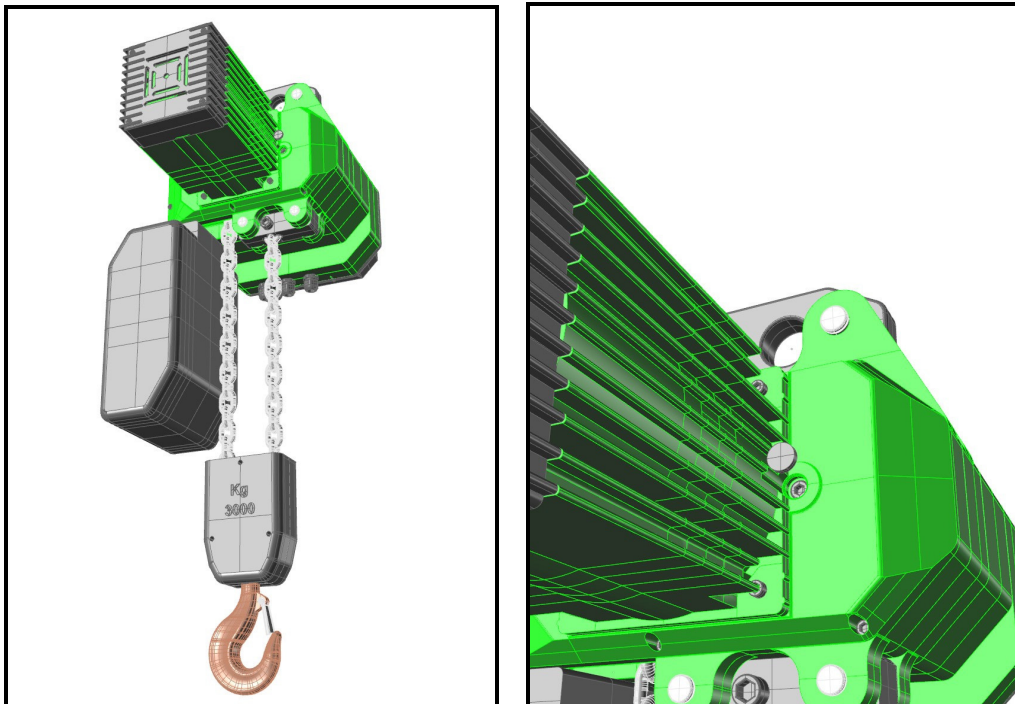
USE A 27 KEY TO ADJUST THE CLUTCH.



15.3 ADJUSTMENT OF THE CLUTCH 3,4,5t WR SERIES HOIST

1. Isolate the hoist.
2. Remove the black cap on the left of the motor case.
3. Set the central screw to increase the capacity of the hoist
4. Connect the hoist, lift the MRC of the hoist, adjust the screw until the hoist lifts the load.
Repeat with the MRC plus 25%.
5. Isolate the hoist.
6. Replace the black cap.

USE A HEXAGON KEY OF 6 mm TO ADJUST THE CLUTCH.



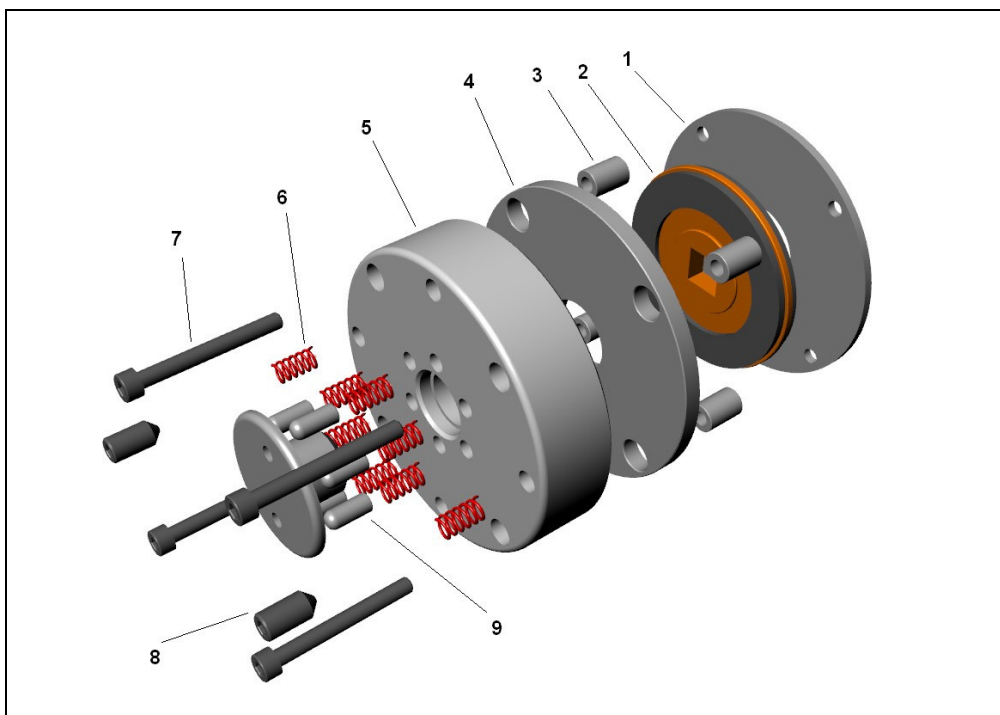
15.4 ADJUSTMENT OF THE W SERIES BRAKE

1. Isolate the hoist.
2. Remove the reduction gear cover.
3. Loosen the adjusting round bolt (5) to adjust the tension of the springs.
4. Connect the hoist, lift the MRC and check the brake. Repeat stage 1, 3, and 4 until the brake does not slip with the load lifted. (maximum load is indicated in the certificates enclosed with the hoist.)
5. Isolate the hoist
6. Replace the end cap and screws.

ATTENTION! The braking flange (3) must have from 0,3 to 0,5 mm of air gap from the electro magnet.

15.5 REPLACING THE W and WR BRAKE OR THE SPRINGS W SERIES HOIST

1. Isolate the hoist.
2. Take off the cap (completely unscrewing the screws) and take the cap off its seat.
3. Completely unscrew the screws and take off the springs (6).
4. Draw out the screws and take off the magneto (5).
5. Clean the flat-seats.
6. Assemble the new lining-plate.
7. Finish assembling putting in order: magneto, screws, springs and the plug.
8. Adjust the brake (ref.15.4)
9. Replace the cap and close the screws



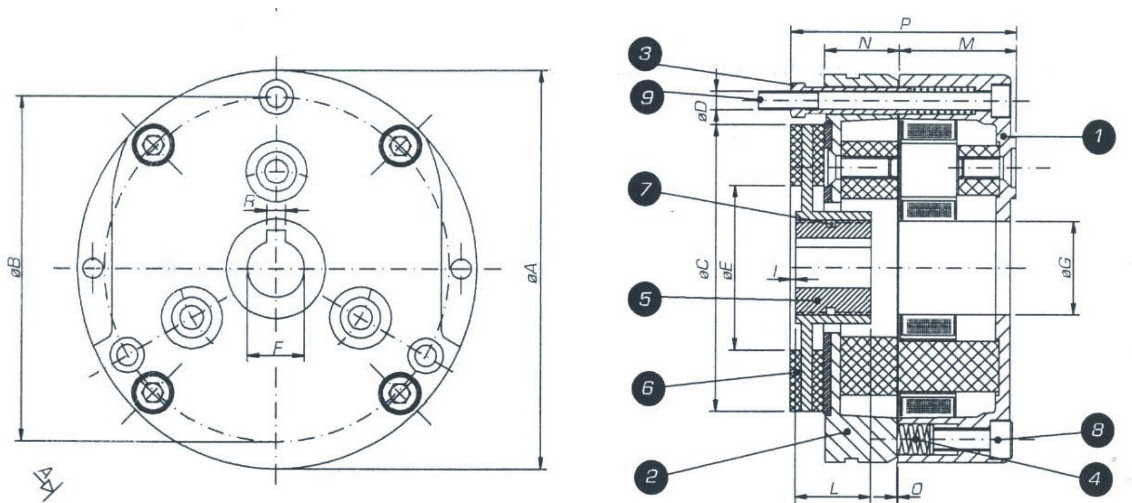
15.6 ADJUSTMENT OF THE WR SERIES BRAKE

1. Isolate the hoist.
2. Take off the black cap (completely unscrewing the screws) and take the cap off its seat.
3. Unscrew the bolts (3).
4. Loosen the adjusting screws (9) to adjust the air gap. 5 Fix the bolts (3) to block the brake 6
5. Replace on the black cap.

ATTENTION! The braking flange (4) must have from 0,2 to 0,5 mm of air gap from the coil (5).

15.7 REPLACING THE WR BRAKE OR THE SPRINGS **WR SERIES HOIST**

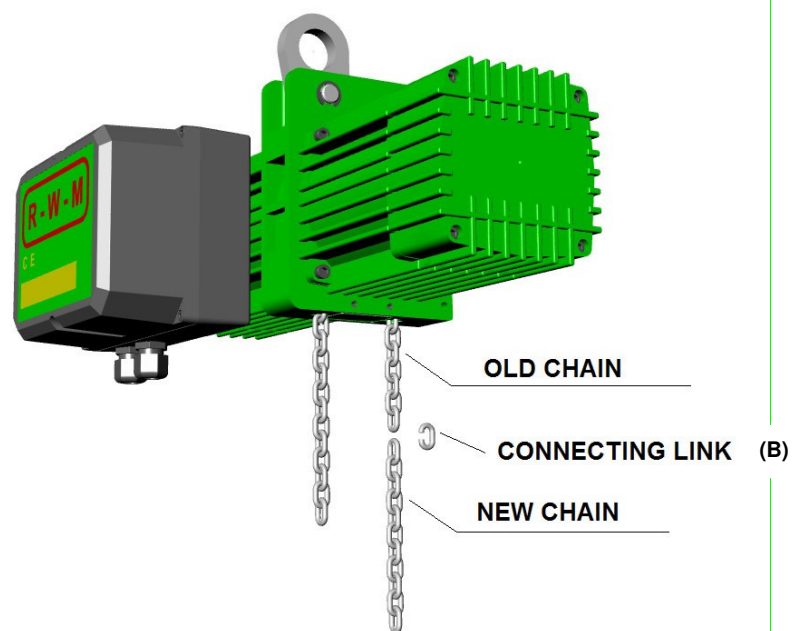
1. Isolate the hoist.
2. Take off the cap (completely unscrewing the screws) and take the cap off its seat.
3. Completely unscrew the screws (9).
4. Draw out the screws and take off the magneto.
5. Clean the flat-seats.
6. Assemble the new lining-plate.
7. Finish assembling putting in order: magneto, screws, springs and the plug.
8. Adjust the brake (ref. 15.6)
9. Replace the cap and close the screws



ATTENTION! The braking flange (2) must have from 0,3 to 0,5 mm of air gap from the electro magnet.

16. REPLACING THE CHAIN

1. Disassemble the chain collector.
2. Remove the aluminium chain strap.
3. Hook link B to the end of the chain.
4. Hook the new chain link to link B.
5. Operate the hoist by lowering the chain.
6. Stop the chain's descent when a sufficient amount of the chain has accumulated on the load side.
7. Assemble the chain stop on the opposite side to the load.
8. Remove the hook and fit it to the new chain.
9. Re-assemble the chain collector, inserting the linear chain without it kinking.



Note: To prevent the chain from excessive wearing, lubricate it once a week, or more frequently, depending on its environment. (e.g. Environments with high levels of acid, dust, salt water.)

17 PROBLEM SOLVING

The hoist does not move

1. A phase is missing; connect the wires in the box correctly and ensure that the current is correct.
2. A fuse is burnt out; replace
3. The brake is siezed; disassemble it and clean it thoroughly (this can occur after a 6/12 month period of inactivity due to oxidation of the brake lining.)

The load drops

The brake motor is worn out; check and repair the motor.

The hoist does not lift the load

Adjust the clutch.

The hoist does not stop

The pendant control switch is stuck; replace.

Current is present on the hook

The system is not insulated; inspect the system thoroughly and ensure that the system's earthing is correct.

The chain makes an abnormal noise

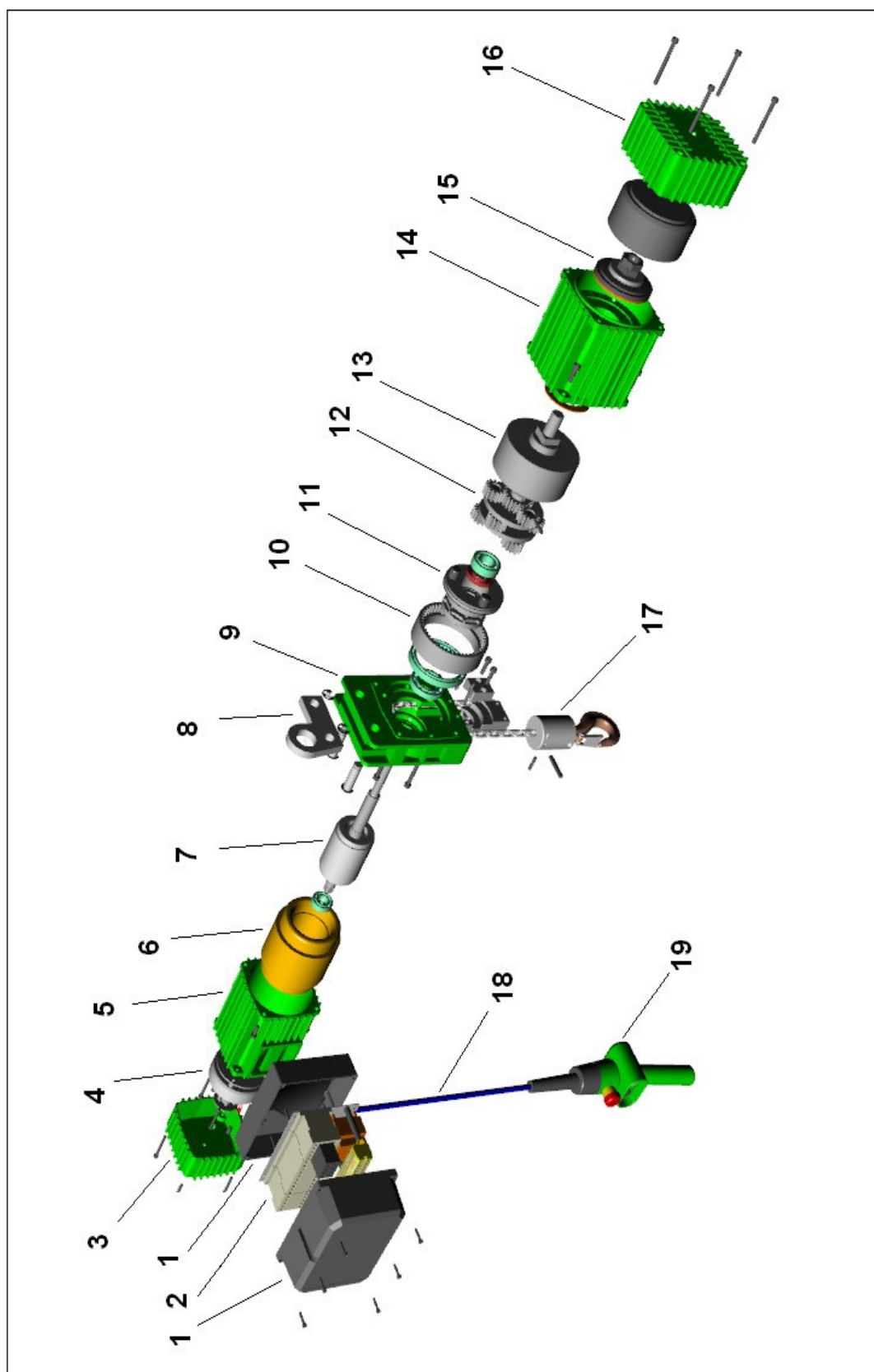
1. The chain is dry; lubricate.
2. The load sprocket is worn out; replace.

The trolley does not run on the beams

1. The beam is tilted; check and correct the tilt.
2. The beam is dirty with oil; clean the trolley beam with a cloth.

WARNING! For all repairs, re-assemble using only genuine spare parts.

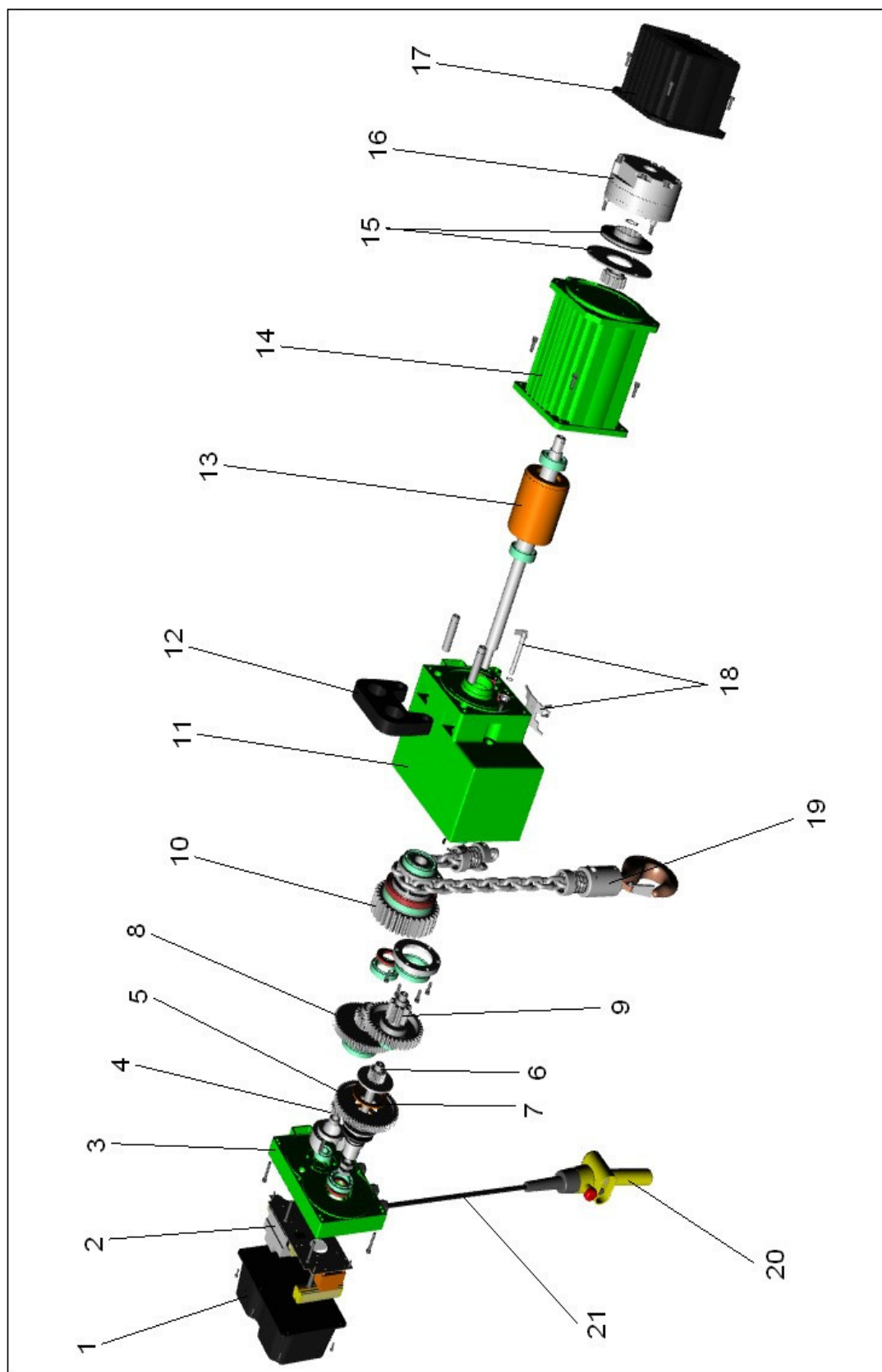
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18.1 SPARE PARTS - W SERIES HOIST

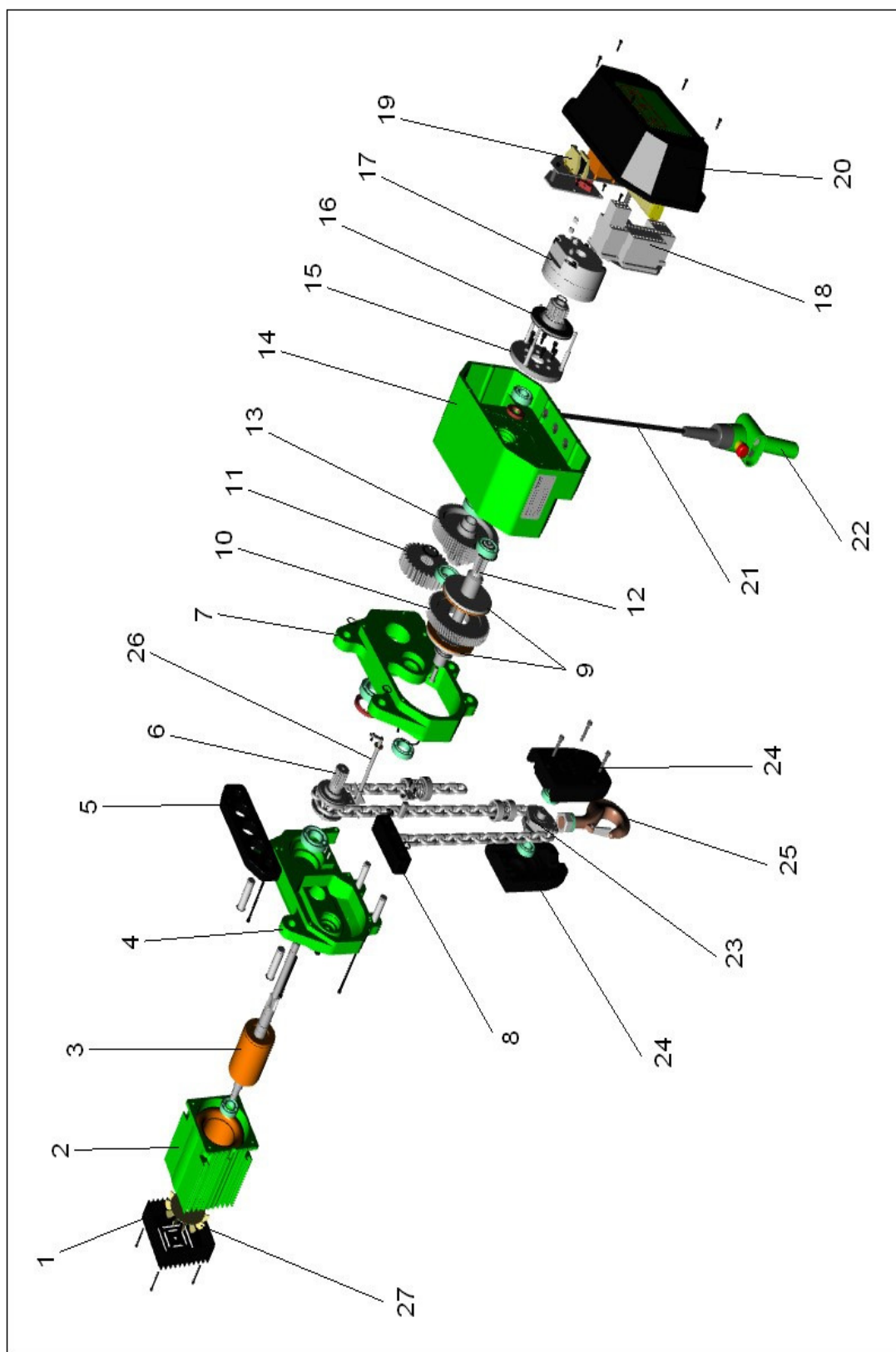
1. PLASTIC BOX
2. ELECTRICAL PANEL L.T. 24V
3. ALUMINIUM MOTOR COVER
4. COMPLETE BRAKE SYSTEM D,100/220 VDC
5. MOTOR CASE
6. STATOR
7. MOTOR SHAFT
8. EYEBOLT SUSPENSION
9. ALUMINIUM CENTRAL BODY
10. RING GEAR
11. CHAIN SPROCKET
12. COMPLETE REDUCTION GEAR
13. BELL GEAR
14. REDUCTION GEAR ALUMINIUM CASE
15. COMPLETE CLUTCH SYSTEM
16. REDUCTION GEAR ALUMINIUM COVER
17. COMPLETE BOTTOM BLOCK
18. PENDANT CABLE
19. PENDANT

19 WR SERIES 2t HOIST PARTS



19.1 SPARE PARTS - **WR SERIES 2t HOIST**

1. ALUMINIUM PANEL COVER
2. ELECTRICAL PANEL L.T. 24V
3. ALUMINIUM REDUCTION GEAR FLANGE
4. PINION
5. CLUTCH GEAR
6. GEAR PINION CLUTCH
7. COMPLETE CLUTCH SYSTEM
8. FLANGE DOUBLE GEAR
9. DOUBLE GEAR
10. CHAIN SPROCKET
11. ALUMINIUM CENTRAL BODY
12. EYEBOLT SUSPENSION
13. MOTOR SHAFT
14. STATOR COMPLETE OF ALUMINIUM CASE
15. BRAKE DISC
16. ELECTROMAGNET BRAKE AC4
17. ALUMINIUM BRAKE COVER
18. UPPER/LOWER LIMITS SHAFT
19. COMPLETE BOTTOM BLOCK
20. PENDANT
21. PENDANT CABLE



20.1 SPARE PARTS - **WR Series 3t / 3.2t / 4t / 5t / Hoist**

1. ALUMINIUM COVER
2. STATOR WITH ALUMINIUM CASE
3. DRIVING SHAFT + ROTOR
4. CENTRAL BODY (MOTOR SIDE)
5. EYEBOLT SUSPENSION
6. CHAIN SPROCKET
7. CENTRAL BODY (REDUCTION GEAR SIDE)
8. STEEL CHAIN BLOCK
9. CLUTCH KIT
10. CLUTCH GEAR
11. GEAR
12. CLUTCH SHAFT
13. DOUBLE GEAR
14. ALUMINIUM GEARS CASE
15. IRON DISC
16. BRAKE DISC
17. ELECTROMAGNETIC 400VAC
18. ELECTRICAL PANEL
19. KIT TRANSFORMER + FUSES
20. ALUMINIUM PANEL COVER
21. PENDANT CABLE
22. PENDANT
23. BOTTOM SPROCKET
24. BOTTOM BLOCK
25. LOAD HOOK
26. UPPER/LOWER LIMIT KIT
27. PLASTIC FAN

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